

Date: Wednesday, 07/01/2009 1:37:36 PM  
 User: Julie Dawson

## Process Sheet

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : STRUT WELDMENT ASSY
<b>Job Number</b> : 44485	
<b>Estimate Number</b> : /10675	
<b>P.O. Number</b> :	<b>Part Number</b> : D3443041
<b>This Issue</b> : 07/01/2009 <b>S.O. No.</b> :	<b>Drawing Number</b> : D3443 REV. B
<b>Prsht Rev.</b> : NC	<b>Project Number</b> : N/A
<b>First Issue</b> : / / <b>Type</b> : LARGE FAB ASSY	<b>Drawing Revision</b> : B
<b>Previous Run</b> : 41887	<b>Material</b> :
<b>Written By</b> :	<b>Due Date</b> : 23/01/2009 <b>Qty:</b> 4 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> : <u>JUL 09.01.09</u>	
<b>Comment</b> : EST REV. A 05.11.17 NEW ISSUE EC	

## Additional Product

Job Number:



<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>
----------------	------------------------------	----------------------

1.0	D34431	Lug
-----	--------	-----



**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty	Part Number	Description
1	D3443-1	lug

Batch

B41913

SP 09.01.14

(4X)

2.0	D34435	Tubing
-----	--------	--------



**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty	Part Number	Description
1	D3443-5	Tubing

Batch

B344030

SP 09.01.14

(2X)

3.0	D34531	Clevis
-----	--------	--------



**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty	Part Number	Description
1	D3453-1	Clevis

Batch

B344995

SP 09.01.14

(4X)

4.0	238805	SS DOWEL PIN 3/4" LONG
-----	--------	------------------------



**Comment:** Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty	Part Number	Description
2	238-805	SS DOWEL PIN 3/4" LONG

Batch

H105037\*

SP 09.01.14

(4X)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STRUT WELDMENT ASS'Y

Job Number: 44485

Part Number: D3443041

Job Number:



Seq. #: Machine Or Operation: Description :

5.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld assembly as per dwg D3443

SP 09.01.14 (4X)

6.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

CP 09-01-15  
~~SP 09-01-14~~

(X4)

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SP 09/01/16 (X4)

8.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

1-Mask holes as per dwg D3443

2-Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

START TIME:

1:25

OVEN TEMPERATURE:

400°

FINISH TIME:

1:55

FL 09/01/26

(4)

9.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-01-26 (X4)

10.0

63215K32

Spherical Bearing



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty

Part Number

Description

Batch

1

63215K32

Spherical Bearing

M 102812 x 1

M 109340 x 3

FF 09/01/28

(4)

11.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble bearing and ball plungers as per dwg D3443 ensure bearing rotates smoothly

FF 09/01/28

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Wednesday, 07/01/2009 1:37:36 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STRUT WELDMENT ASSY

Job Number: 44485

Part Number: D3443041

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/01/28 (x4)

13.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 205

9/1/28

(x4)

SD

14.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/02/02

Job Completion



U 09.01.30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

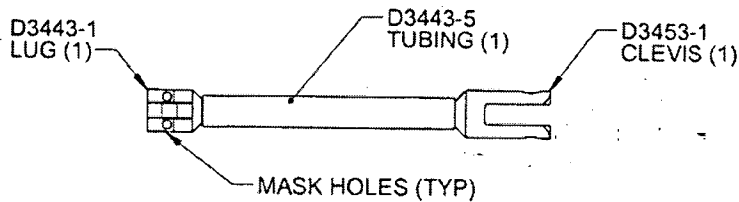
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

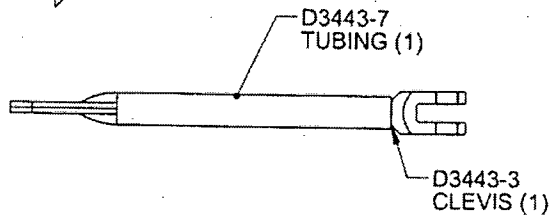
**NOTE:** Date & initial all entries

**DART**

DESIGN RF	DRAWN BY RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3443</b>	REV. B SHEET 1 OF 3
DATE <b>05.12.05</b>	TITLE <b>STRUT WELDMENT ASSEMBLY</b> SCALE 1:4		
A	05.09.02	NEW ISSUE	
B	05.12.05	ADDED -9 PIN; REMOVED BALL PLUNGER; REVISE TOLERANCE; & $\phi 0.125$ WAS #30	

**RELEASED**05.12.09 *[Signature]*PRESS FIT McMASTER-CARR P/N 63215K32  
BALL JOINT BEARING AFTER POWDER COAT

8.54

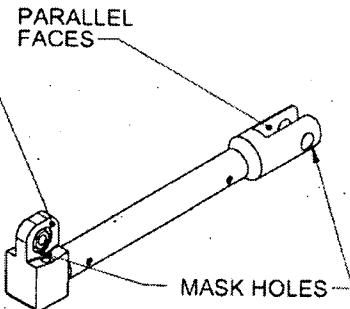
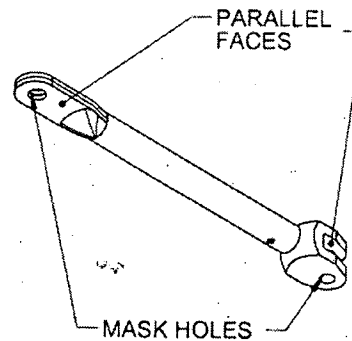
INSTALL SPAENAUER  
P/N 238-805 DOWEL PIN  
(TYP)0.10  
(TYP)INSTALL SPAENAUER P/N 238-805  
DOWEL PIN

9.78

0.10

**NOTES:**

- 1) WELD PER DART QSI 004
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER

**D3443-041**

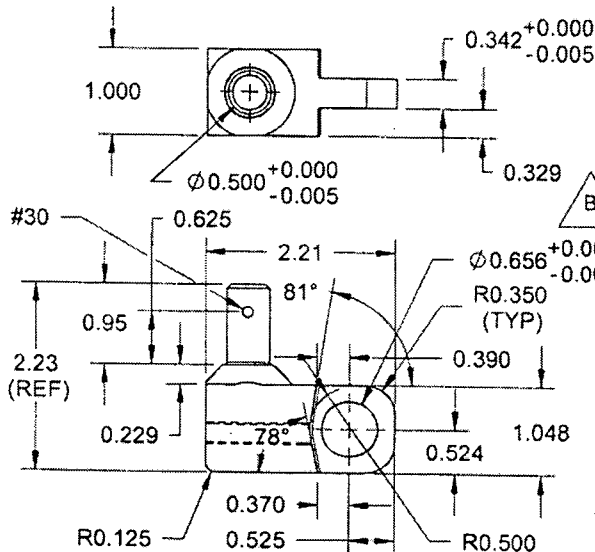
**D3443-043** SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *4485*

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

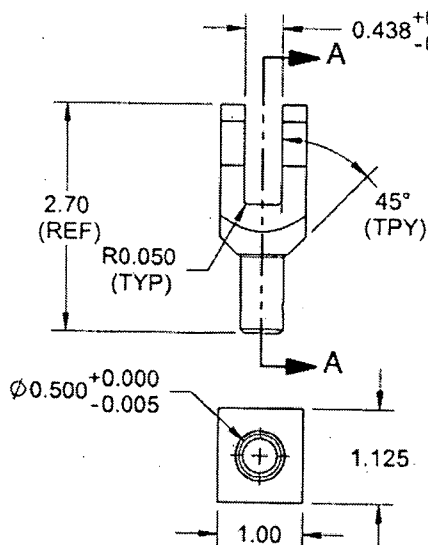
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED  
OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

DESIGN RF	DRAWN BY RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. <b>D3443</b>	REV. B SHEET 2 OF 3
DATE <b>05.12.05</b>	TITLE <b>STRUT WELDMENT ASSEMBLY 1:2</b>		

**D3443-1 LUG****D3443-1 NOTES:**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC M17-4B)

**D3443-3 CLEVIS****D3443-3 NOTES:**

- 1) MATERIAL: AISI 304 SS ROUND BAR (REF. DART SPEC M304R)

**GENERAL NOTES:**

- 2) FINISH: NONE  
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) ALL DIMENSIONS ARE IN INCHES  
5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. **44485**

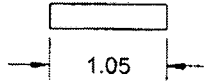
COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

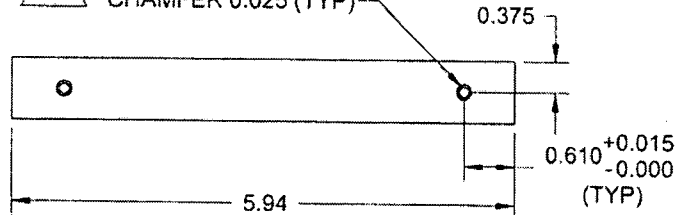
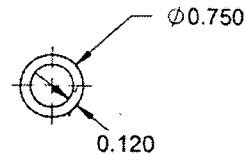
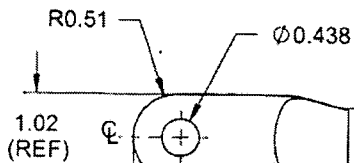
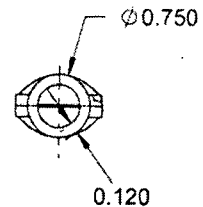
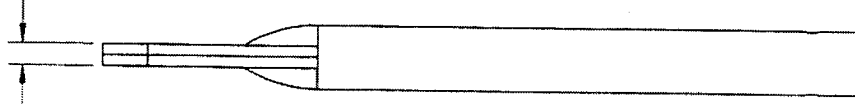
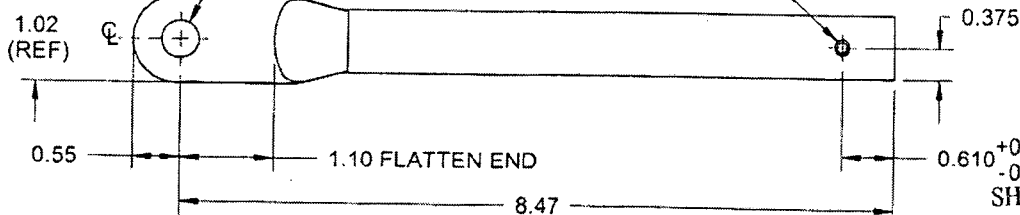


**DART**

DESIGN RF	DRAWN BY RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. <b>D3443</b>	REV. B SHEET 3 OF 3
DATE <b>05.12.05</b>	TITLE <b>STRUT WELDMENT ASSEMBLY</b> SCALE 1:2		

 $\varnothing 0.210^{+0.005}_{-0.010}$ **D3443-9 PIN****D3443-9 NOTES:**

- 1) MATERIAL: DELRIN II 150R OR ACETRON GP ACETAIL (REF. DART SPEC M-DELRIN-R)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

DRILL  $\varnothing 0.125$  THRU  
CHAMFER 0.025 (TYP)**RELEASED**  
05.12.09 [Signature]**D3443-5 TUBING** $0.260^{+0.000}_{-0.030}$ DRILL  $\varnothing 0.125$  THRU  
CHAMFER 0.025**D3443-7 TUBING****D3443-5/-7 NOTES:**

- 1) MATERIAL: AISI 316/304 SS SEAMLESS TUBING (REF. DART SPEC M304TR0.7500W.120)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.025

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 44485

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.